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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/697,529	10/30/2003	Peter Jahn	Bayer 10244.2-WCG	8156
27386	7590	02/17/2005	EXAMINER	
NORRIS, MC LAUGHLIN & MARCUS, P.A. 875 THIRD AVE 18TH FLOOR NEW YORK, NY 10022			KOCZO JR, MICHAEL	
			ART UNIT	PAPER NUMBER
			3746	

DATE MAILED: 02/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/697,529	JAHN ET AL. <i>ED</i>
	Examiner	Art Unit
	Michael Koczo, Jr.	3746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 18 January 2005.  
 2a) This action is FINAL.                            2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-29 is/are pending in the application.  
 4a) Of the above claim(s) 22 is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-21 and 23-29 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 30 October 2003 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date 10-30-03.

4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.  
 5) Notice of Informal Patent Application (PTO-152)  
 6) Other: \_\_\_\_\_.

## **DETAILED ACTION**

Applicant's election with traverse of the group I invention in the reply filed on January 18, 2005 is acknowledged. The traversal is on the ground(s) that no additional burden would be placed on the Patent office in searching both groups together. This is not found persuasive because the examination burden is not limited exclusively to a prior art search but also includes the effort required to apply the art by making and discussing all appropriate grounds of rejection. Multiple inventions, such as those in the present application, normally require additional reference material and further discussion for each additional invention examined. Concurrent examination of multiple inventions would thus typically involve a significant burden even if all searches were coextensive.

The requirement is still deemed proper and is therefore made FINAL.

### *Specification*

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

#### **Arrangement of the Specification**

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables

having more than 50 pages of text are permitted to be submitted on compact discs.) or

REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a).

"Microfiche Appendices" were accepted by the Office until March 1, 2001.)

(e) BACKGROUND OF THE INVENTION.

(1) Field of the Invention.

(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.

(f) BRIEF SUMMARY OF THE INVENTION.

(g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).

(h) DETAILED DESCRIPTION OF THE INVENTION.

(i) CLAIM OR CLAIMS (commencing on a separate sheet).

(j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).

(k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

The disclosure is objected to because of the following informalities:

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

For example, on page 2, line 9, "electropnuematically" is a misspelling.

On page 2, line 29, and page 3, line 27, "adjusted (1003)" is not understood. That is, what is the structure which is identified by the reference numeral?

On page 4, line 9, it is not understood what is meant by a "decentral control unit".

On page 12, lines 5 and 6, for example, "0,1" should read --0.1--.

On page 30, the bottom paragraph refers to a "chambered diaphragm" and states that the upper and lower parts of figure 3 show different operating states. It is not understood what is meant by "chambered diaphragm" since no chamber is described. Also, figure 3 does not show different operating states.

Appropriate correction is required.

***Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the structure of claims 1 (truncated cone) and 25 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 12, 13, 14 and 26 to 29 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 12 and 13 recite the combination of a pump and a distributor valve as shown in figure 5. The pump structure and the valve structure are not disclosed as being usable together. That is, there is no disclosure of a pump having a valve as claimed. Since there is no disclosure of how to use the claimed multi-way distributor valve in combination with the diaphragm pump, it would require undue experimentation by one of ordinary skill in the art to know how to make and use the device.

Regarding claim 14, there is no disclosure of how the outer plate is thermally controllable and what is the purpose of this function.

Regarding claims 26 to 29, there is no mention in the specification of how the percentage of deformation is defined. Since there is no disclosure of how to determine the degree of deformation, it would require undue experimentation by one of ordinary skill in the art to know how to make and use the device.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 to 21 and 23 to 29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The preamble of claim 1 recites a “Multipart pump head”, yet the body of the claim is drawn to a pump. This raises a question regarding the scope of the claims.

In claim 1, line 6, it is not clear what is the difference between a spherical segment and a spherical zone.

In claim 1, lines 11 and 12, the inlet duct, connecting ducts and outlet duct are recited in a functionally and structurally disconnected manner. These ducts are merely set forth in a cataloguing manner without any relationship therebetween.

In claim 1, line 19, “adjustable” is not structure which can be identified by a reference numeral.

In claims 2, 16 and 19, it is not clear what is meant by “decentral electropneumatic control unit”.

Claim 7 is indefinite because it recites alternative embodiments.

Regarding claim 8, it is not clear what is meant by “chambered diaphragm” since no chamber is described in the specification.

In claim 9, “it is a double diaphragm pump which consists of three plates” is duplicitous. See similar language in claim 1.

Claim 12 is indefinite because it purports to claim a “valve” and recites valve structure, yet the body of the claim incorporates pump structure. This raises a question regarding the scope of the claim. That is, is applicant intending to claim a valve per se, or a pump. It is to be noted that the valve and pump are described in the specification as structurally and functionally distinct.

The scope of claims 12 to 14 cannot be ascertained because of their basis on a non-enabling disclosure, for the reasons as set forth previously.

In claim 15, it is not clear what is meant by “hydraulic diameter”. How is this different from the structural diameter?

The scope of claims 21 and 23 cannot be ascertained because they do not recite structure to further limit a preceding claim.

Claim 24 recites elastic materials in an alternative manner which is indefinite. Applicant may consider reciting these materials in “Markush” form.

Regarding claims 26 to 29, since the percentage of maximum deformation is not defined, the scope of the claims is unclear.

#### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 to 6, 8, 9, 11, 16, 17, 18, 21, 23 and 26 to 29, as understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Nystroem (US 3,741,687) in view of either of Goetgheluck (FR 1,457,419) or Carver (FR 1,177,065). Figure 5 of Nystroem shows three plates separated by two diaphragms 54 and 100 to form a pumping chamber 56 and two shut-off chambers 60 and 62. Spaces 74, 76 and 78 are control spaces. See figure 3 which shows a groove 64 in the product space 56. However, Nystroem does not disclose an axially moving disk in the control space 74 for reducing or increasing the maximum diaphragm travel in the pumping chamber. Each of Goetgheluck or Carver disclose a diaphragm pump having screw means 13 and 22 in the control space, respectively, for reducing or increasing the maximum diaphragm travel in the pumping chamber for controlling the amount of fluid which is pumped, which control renders the pump more versatile. In view of these teachings, it would have been obvious to provide the pump of Nystroem with an axially moving disk in the control space 74.

Regarding claims 26 to 28, the deformation of a diaphragm of Nystroem is a function of the pressure of the fluid in a control space. Therefore the structure of Nystroem is inherently capable of being limited to the degrees as recited in these claims by control of the fluid pressure in a control space. Furthermore, regarding claims 26 to 29, one of ordinary skill in the art would design the product and control spaces so as to pump or meter a desired quantity of fluid per deformation. No unobvious or unexpected result is obtained by the claimed maximum deformations.

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nystroem (US 3,741,687) in view of either of Goetgheluck (FR 1,457,419) or Carver (FR 1,177,065), as applied to claim 5 above, and further in view of Meloche et al. (US 6,190,136). Meloche et al. teach the

use of elastomeric material for the diaphragm because of its flexibility (col. 3, para. 2). In view of this teaching, it would have been obvious to use elastomeric material as the material of the diaphragm of Nystroem, as previously modified.

### ***Double Patenting***

Claims 1 to 25 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1 to 25 of copending Application No. 10/600,299. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

### ***Allowable Subject Matter***

Claims 7, 10, 15, 19, 20 and 25 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

***Conclusion***

The prior art could not be applied to claims 12, 13 and 14 due to their basis on a non-enabling disclosure.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry relating to patent applications in general should be directed to the Patent Assistance Center at 1-800-786-9199.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Koczo, Jr. whose telephone number is 571-272-4830. The examiner can normally be reached on M-Th; 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached at 571-272-4834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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